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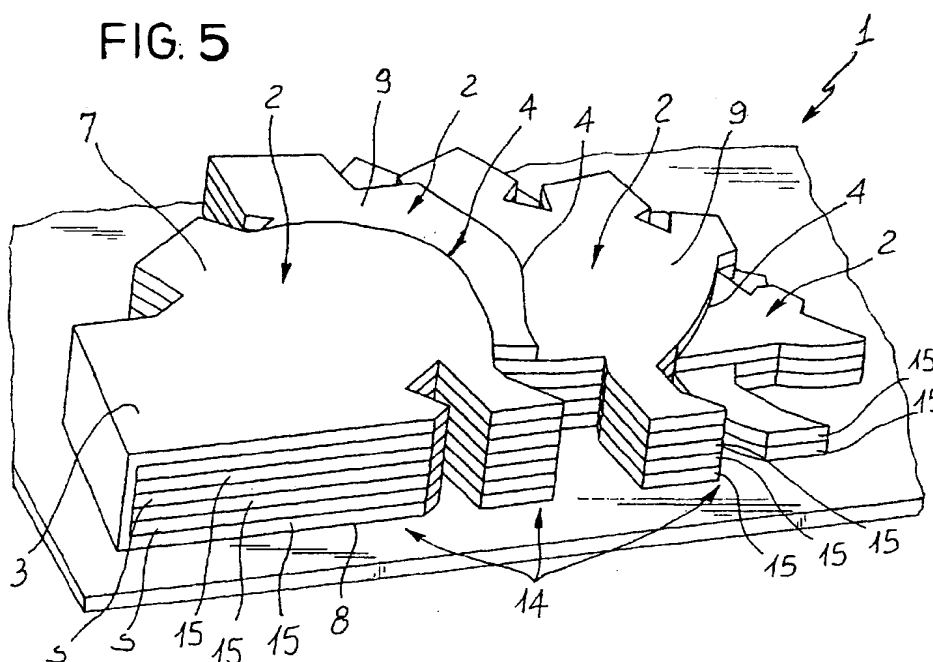
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(54) Book

(57) There is described a book comprising a predetermined number of pages (2) of a thickness preferably higher than 0.5 mm put into mutual-superposition relationship and in engagement with each other at least at a binding region (3). The book has a first and a second series of pages (5, 6) extending on opposite sides of the book itself so that each of them is increasingly smaller,

in plan view, than the more internal page with reference to the book extension. At least one first graphic motif (11) is reproduced on the covers and it continues with portions (11a) complementary thereto, provided on perimetral bands (9) defined on each of the first and second series pages so that, looking at the subject book from both sides, a marked tridimensional character can be recognized.

FIG. 5



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D scription

[0001] The present invention relates to a book. In particular, it relates to a book, booklet or volume intended for use by children both for reading or looking over the graphic motifs therein shown and for playing with it.

[0002] It is known that books or booklets presently available on the market intended for use by children have pages of such a structure and conformation that a good resistance is ensured as well as an easy handling and capability to leaf through the book itself.

[0003] Typically, these types of books consist of pages made of paperboard, thin card, plastic, wood or other similar materials so as give each page a relatively high thickness and stiffness that will ensure a perfect flatness of the pages themselves, great strength of the whole booklet and easy accessibility for a child to the different pages forming the book itself.

[0004] On the other hand, strength, easy handling and ready accessibility to the individual pages of the book surely are essential requirements for books or volumes of the above mentioned type, taking into account the particular people for whom they are intended.

[0005] A further requirement that books or booklets intended for children must have is an agreeable and winning aesthetic appearance because, as known, these books, in addition to being used as a reading or looking-over instrument for the graphic representations therein shown, are often also employed as a toy to be used or handled by children at will.

[0006] In order to meet these types of requirements at least partly, presently available plasticized books or books bound in paperboards are provided with pages having perimetric edges with the most varying shaping so that each book can take a shape belonging to characters, animals, vehicles or several different objects or subjects that are likely to be particularly inviting for a child.

[0007] In addition, in order to improve both the aesthetic aspect and accessibility to each of the book pages, some books presently on the market are provided, at one of their sides or at a region of their edge, with suitably shaped protuberances or tabs possibly carrying graphic motifs defining regions for direct selection of the desired page, of the address book type.

[0008] In other words, books are provided with tabs placed on each page at offset positions relative to the adjacent next pages so that a child can directly gain access to the page of interest.

[0009] While these types of products are widespread, all books of the above described kind have pages of same shaping and therefore define structures that, in conclusion, take a substantially two-dimensional conformation.

[0010] In other words, even if a book is shaped in the form of a particular character or a particular object and possibly provided with tabs, a user only perceives a flat element devoid of a true tridimensional appearance.

[0011] In order to improve the tridimensional aspect to be given to a book by making it take, as much as possible, the shape of a toy, the same Applicant has in the past developed a product consisting of a plurality of superposed pages where it is provided that each page should have overall dimensions in plan contained in the shape of the underlying page and greater than those of the immediately superposed page.

[0012] In other words, the same Applicant has in the past put on the market and protected by patent (US Patent Application No. 08/866,533), a book comprising a bottom page of maximum sizes and overall dimensions on top of which a plurality of subsequent pages of increasingly smaller overall dimensions are consecutively placed.

[0013] By virtue of the thickness of each of the pages, the product thus obtained has an important tridimensional appearance also due to the particular continuity of the graphic motifs reproduced on the book surfaces in sight.

[0014] While the last mentioned product has won a great success on the market and actually has an important tridimensional appearance enabling a child to perceive the book also as a toy, the Applicant has noticed that this product too can be further improved.

[0015] In particular, the above described tridimensional books conceived by the same Applicant, as already pointed out, have a base page on top of which the subsequent pages of increasingly smaller sizes are placed. In this way, only one side of the book, the upper one, takes a really tridimensional appearance.

[0016] In other words, while surely the book of the above described conception produced by the same Applicant represents an improvement, as compared with other products, in terms of tridimensional appearance, easy access to the pages substantially at any position of the edge of each page and attractive power for a child, however it appears to be susceptible of further improvement.

[0017] In the light of the above, it is a fundamental object of the present invention to provide a new book that, while being of same strength, easy handling and reasonable production costs as the presently available products, is able to further improve the tridimensional character perceptible by a user, in particular with reference to the graphic motifs reproduced on the book surfaces in sight.

[0018] In particular, it is an object of the present invention to provide a book that, when in a closed condition, is able to represent any characters, animals or objects in general with marked realism and high tridimensional effect on both sides of the book itself; so that it can be perceived as a true and real toy by the user.

[0019] The foregoing and further objects that will become more apparent in the course of the present description are substantially achieved by a book having the features set forth in claim 1.

[0020] Further features and advantages will be best

understood from the detailed description of some preferred but non exclusive embodiments of a book in accordance with the present invention. This description will be taken hereinafter with reference to the accompanying drawings, in which:

- Fig. 1 diagrammatically shows a possible embodiment of a book in accordance with the invention, in a closed condition of the book seen in plan;
- Fig. 2 is a view in profile of the book shown in Fig. 1;
- Fig. 3 shows a second embodiment of a book in accordance with the invention, in a closed condition of the book seen in plan;
- Fig. 4 is a plan view of the book shown in Fig. 3 which is open at an intermediate page;
- Fig. 5 is a perspective view diagrammatically showing a book in accordance with the invention, of the type referred to in Figs. 1 and 3 for example, the book resting on a plane parallel to the plane defined by the book pages in a closed condition of the book;
- Fig. 6 is a diagrammatic perspective view of the book shown in Fig. 5 resting on a plane in a position orthogonal to that shown in Fig. 5, due to the presence of rest means in accordance with the invention;
- Fig. 7 is a plan view of a further embodiment of a book in accordance with the invention; and
- Fig. 8 is a view in profile of the book shown in Fig. 7.

[0021] With reference to the accompanying drawings, a book in accordance with the present invention has been generally identified by reference numeral 1.

[0022] It is to be pointed out that in the following specification as well as in the appended claims by plan view it is meant the orthogonal projection of the book on a plane parallel to the book pages, which are deemed to be in a condition of parallelism with each other both when the book is represented in a closed condition and when it is represented in an open condition. Still for a more convenient discussion and understanding, reference will be generally made, both in the detailed description and in the claims, to a closed-book condition, except when otherwise expressly specified.

[0023] After the above statements, book 1 in accordance with the present invention comprises a predetermined number of pages 2 put into mutual-superposition relationship and in engagement with each other at a binding region 3, as clearly shown in the accompanying drawings.

[0024] Each page has a respective shaping contour 4 defining a predetermined conformation of the page itself, seen in plan view (see Figs. 1, 3 and 7, for example).

[0025] It is to be noted that the pages forming the book or volume in accordance with the invention are divided into a first series of pages 5 and a second series of pages 6 consecutive to the first series.

[0026] Depending on the book thickness and overall

dimensions, the first and second series of pages may each comprise two, three or more pages. Each page of the first series has a respective shaping contour which at least over a section of its extension has overall dimensions in plan greater than those of the shaping contour of the page of the first series superposed thereon. More specifically it is to be noted that the shaping contour of each page of the first series seen in plan view has the same overall dimensions as, or greater overall dimensions than those of the shaping contour of the page of the first series immediately superposed thereon, substantially over the whole extension of each contour.

[0027] In this way, the overall dimensions in plan of the first series pages become increasingly smaller according to a step-wise diminishing profile on moving closer to the front book cover 7 which is the first one of the first series pages and the one having the smallest overall dimensions.

[0028] In an original manner, the book in accordance with the invention also involves a second series of pages 6 which, as said, are consecutive to the pages of the first series, each of which has a shaping contour that, at least over a section of its extension, shows overall dimensions in plan smaller than those of the second series page superposed thereon.

[0029] In this case too, preferably the shaping contour of each page of the second series is of the same overall dimensions as, or of greater overall dimensions than those of the second series page immediately superposed thereon, substantially over the whole extension of the shaping section of the page taken into account.

[0030] In this manner, if on one side, on moving closer to the front cover 7 of the book the first series pages become increasingly smaller as regards their overall dimensions in plan, on the opposite side the second series pages too become increasingly smaller as regards their overall dimensions in plan on moving closer to the rear cover 8 of the book; the rear cover 8 is the last page of the second series pages and also the page having the smallest overall dimensions in plan among the pages of the second series.

[0031] Practically the book in accordance with the present invention has one or more intermediate pages of maximum overall dimensions from the opposite surfaces of which the first and second series pages increasingly become smaller.

[0032] In order to give the book the desired tridimensional effect and increasingly diminishing extension on both sides of the book pages, each of the first and second series pages has a thickness greater than a given value, preferably greater than 0.5 mm.

[0033] In more detail, it is to be noted that the shaping contour of each page of the first series has, as said, overall dimensions in plan greater than those of the page superposed thereon or, possibly, substantially coincident with these overall dimensions at least over part of its extension.

[0034] Likewise, the shaping contour of each page of

the second series has overall dimensions in plan smaller than those of the page superposed thereon over a major section of its extension, possibly except for a portion thereof where the shaping contour of two superposed pages is substantially coincident.

[0035] In particular, at the binding region the shaping contour of each of the first and second series pages has the same overall dimensions in plan as those of the underlying pages or the superposed pages, as viewed from the accompanying drawings.

[0036] Still for the purpose of giving the book a tridimensional appearance so that it may be comparable to a true toy, in the book in accordance with the invention it is provided that on each page of the first series at the face turned towards the front cover a predetermined perimetric band 9 should be defined. This perimetric band is externally delimited by the shaping contour of the page itself and internally delimited by an ideal line 10 substantially coincident with, or internal to, the orthogonal projection on the page itself of the shaping contour of the page superposed thereon.

[0037] This perimetric band 9 (see Fig. 4, for example) has a varying extension along the shaping contour because each page of the first series, as well as each page of the book in accordance with the invention, often has a shaping contour of differentiated configuration from the shaping contour of the pages adjacent thereto.

[0038] Such a situation can be seen both in Fig. 3 where a dinosaur-shaped book is illustrated, and in Fig. 7 where a turtle-shaped book in accordance with the invention is shown.

[0039] In the same manner as above described with reference to the pages of the first series, the pages of the second series too have a perimetric band 9 externally delimited by the shaping contour of the page itself and internally delimited by a line substantially coincident with, or internal to, the orthogonal projection on the page itself of the shaping contour of the page placed below it, i.e. the page closer to the rear cover 8. Also the perimetric band defined on the pages of the second series has a varying extension along a shaping contour due to the different shape that each of the pages is likely to take.

[0040] Practically, with reference to the pages of the first series the perimetric band is defined, on each page, at a face turned towards the front cover. In a similar and opposite manner, the perimetric band of the pages of the second series is defined on the face of each page turned towards the rear cover.

[0041] In this way, looking at the concerned book from both sides, one can see the progressive decreasing of the page sizes from a central region towards the covers that take minimum sizes and on each of the book sides said perimetric bands can be also visually noticed.

[0042] It is to be noted that at the front cover 7 or at the rear cover 8 and in particular on the outer faces of the latter a first graphic motif 11 can be defined, Vice versa, on the inner faces of each cover at least one sec-

ond graphic motif 12 can be defined. As regards pages following the covers and interposed therebetween, it is to be pointed out that if pages belong to the first series, each of them on a face turned towards the cover has respective complementary portions 11a of the first graphic motif 11 placed at least on the perimetric band and the second graphic motif 12 extending in the region internal to the perimetric band.

[0043] On the face of the first series pages turned towards the rear cover the presence of the second graphic motif alone can be provided, as shown in Fig. 4, for example. Likewise, if the intermediate pages placed between the covers belong to the second series, these pages have complementary portions of the first graphic motif placed at least on the perimetric band at the face turned towards the rear cover. This face preferably has the representation of the second motif internally of the ideal line 10 delimiting the perimetric band 9. Preferably on the face of the second series pages turned towards the front cover, the second graphic motif alone may be provided.

[0044] At all events, by virtue of the described structure, looking at the book from both sides, a marked tridimensional effect can be noticed, due to the step-wise diminishing extension of the pages on moving away from the covers and also to the complementary character of the graphic motifs present on the perimetric bands of the first and second series with respect to the graphic motif present on the outer face of each of covers 7, 8.

[0045] As regards the second graphic motif, it may for example consist of graphic representations differentiated (in terms of tones and/or subjects) from those defining the outer appearance of the book, i.e. those helping in giving the book the features of a toy. For instance, in the embodiment shown in Fig. 4 the second graphic motif may consist of graphic representations illustrating a story or a tale (merely narrated by means of drawings or with the aid of inscriptions or words being part of the second graphic motif).

[0046] In accordance with a possible alternative embodiment of the invention, it is to be noted that a third graphic motif 18 differentiated from the first graphic motif may be provided on the outer face of the rear cover.

[0047] In this case the perimetric bands of the second series pages could be provided with complementary portions 18a of said third graphic motif. In this way, looking at the book of the invention from one side, perception of an object or character will be obtained and looking at the same book from the opposite side perception of a different object will be obtained, at least as regards colours, graphic impact of the motif and partly also the contour shaping of each page.

[0048] Actually, due to the above features, the book will become still more winning and amusing when used as a toy.

[0049] It is also to be pointed out that, with reference to the starting and end covers, the outer faces of the latter are at all events completely concerned with the

first and/or third graphic motifs respectively.

[0050] As regards the pages of the first series following the first one, the face of these pages turned to the front cover has, as said, a perimetric band 9 internally delimited by a line 10 defining separation between the first and second graphic motifs.

[0051] It is to be pointed out that this line can be a net and continuous line or an ideal line and passage between the first and second graphic motifs on the page surface can be for example carried out through shading or other conventional drawing/graphic representation techniques.

[0052] The same concept is also valid with reference to the surface turned to the rear cover as regards the second series pages. It will be understood that an intermediate page of maximum overall dimensions can also be defined, which page has a face turned to the front cover in which there is defined a perimetral band matching with the perimetral bands of the other pages of the first series and with the front cover so as to form the desired graphic motif, as well as a face turned to the rear cover also having a perimetral band matching with the perimetral bands of the second series pages and with the rear cover so as to define the desired tridimensional graphic motif on the opposite side of the book.

[0053] It is apparent that this intermediate page will represent a transition between the pages of the first and second series and can be seen, based on the preceding definitions, as belonging to the pages of the first series and to those of the second series.

[0054] Book 1 may also be provided to include several intermediate pages, all having the maximum overall dimensions and the same shaping and embodying the transition between the pages of the first and second series.

[0055] It is also important to point out that, without departing from the features of the present invention, a predetermined number of pages, typically one or two pages, of the subject book may comprise auxiliary protuberances 13 emerging externally away from the shaping contour both of the page to which they belong and of the underlying page or the page superposed thereon.

[0056] Said protuberances can belong to pages of the first or the second series and have a face turned towards the front cover 7 on which further complementary portions of the first graphic motif are reproduced, as well as, preferably on a face turned towards the rear cover 8, complementary portions of the first graphic motif (or possibly of the third graphic motif).

[0057] Still for the purpose of increasing the realism and tridimensional character of the books in accordance with the invention, the first and/or possibly the third graphic motifs can also continue on the thickness of each page (Fig. 5, 6) preferably covering all extension thereof.

[0058] Advantageously, in accordance with a further aspect of the present invention, the shaping contour of at least one predetermined number of pages of the first

and/or second series defines rest means 14 enabling the book to rest on a plane transverse and preferably orthogonal to the extension plane of each page, as clearly shown in Fig. 6, for example.

[0059] In more detail, the rest means comprises one or more coincident sections 15 of the shaping contour of a predetermined number of pages, which coincident sections have the same configuration and overall dimensions in plan. These coincident sections define rest feet 16 and/or continuous rest surfaces and can be placed close to the above described binding region 3.

[0060] In this way the book will be able to lie in a horizontal plane practically resting on the edge of each page and really behaving like a true toy.

[0061] It will be recognized that for enabling correct resting on a horizontal plane in the portion shown in Fig. 6, the book pages must also have an appropriate weight distribution. More specifically, when the book lies as shown in fig. 6, the overall centre of gravity of the book must be located at such a position that the orthogonal projection of the centre of gravity on the rest plane is contained in the ideal perimeter defined on the same rest plane by the rest means.

[0062] The invention achieves important advantages.

[0063] Firstly, the possibility of playing and the realistic character of the product are made maximum by virtue of the above described tridimensional appearance obtained on each of the book sides, the book being able to really reproduce characters, objects and other things in a much more exact manner so that it becomes very winning and of easy handling for the public for whom it is intended without being disadvantageous in terms of cheapness and easy manufacturing.

[0064] It is also very important to point out that a great help is given by the rest means and the particular structure and weight distribution of the individual pages. By virtue of these features, in fact, book 1 can be lain down on a horizontal plane perpendicular to the pages (Fig. 6), in this condition being exactly like a true toy.

[0065] The possible presence or continuity of the graphic motifs also on the page thickness "S" ensures an aesthetic aspect and a visual impact that surely make the product more desirable than the preceding ones in terms of quality, its tridimensional character being maximized.

Claims

1. A book comprising:

- a predetermined number of pages (2) placed in mutual-superposition relationship and in engagement with each other at least at one binding region (3), each said page having a respective shaping contour (4) defining a predetermined configuration in plan of each page;
- at least one first series (5) of said pages each

having a respective shaping contour (4) that, at least over one preferably major section of its extension, has overall dimensions in plan greater than or partly substantially corresponding to those of the shaping contour of the first series page superposed thereon;

characterized in that said predetermined number of pages also has a second series of pages (6) subsequent to the pages of said first series, each page of the second series having a shaping contour (4) that, at least over one preferably major section of its extension, shows overall dimensions in plan smaller than or partly substantially corresponding to those of the page of the second series superposed thereon.

2. A book as claimed in claim 1, characterized in that the shaping contour of each page of the first series has, over part of its extension, overall dimensions in plan greater than those of the page superposed thereon and, for the remaining part of its extension, overall dimensions in plan substantially corresponding to those of the page superposed thereon.
3. A book as claimed in anyone of the preceding claims, characterized in that the shaping contour of each page of the second series has, at least over part of its extension, overall dimensions in plan smaller than those of the page superposed thereon and, for the remaining part of its extension, overall dimensions in plan substantially corresponding to those of the page superposed thereon.
4. A book as claimed in anyone of the preceding claims, characterized in that the first series of said pages comprises at least two or more pages which are directly consecutive and superposed on each other.
5. A book as claimed in anyone of the preceding claims, characterized in that the second series of said pages comprises at least two or more pages that are directly consecutive and superposed on each other.
6. A book as claimed in anyone of the preceding claims, characterized in that at least at the binding region (3), the shaping contour (4) of each of the first series and second series pages has overall dimensions in plan corresponding to those of the pages (2) placed on top of it or below it.
7. A book as claimed in anyone of the preceding claims, characterized in that said book comprises a starting page or front cover (7) being part of the pages of the first series and at least one end page or rear cover (8) being part of the pages of said second

series.

8. A book as claimed in claim 7, characterized in that each of said pages of the first series and each of said pages of the second series has a thickness greater than a given value, preferably greater than 0.5 mm, to give the book a step-wise diminishing profile on moving away from said covers (7, 8) towards a substantially central page in the book.
9. A book as claimed in anyone of the preceding claims, characterized in that on each page of said first series (5) a perimetral band (9) can be defined which is externally delimited by the shaping contour (4) of the page itself and is internally delimited by a line (10) substantially coincident with, or internal to, the orthogonal projection on said page of the shaping contour of the page superposed thereon, said perimetral band having a varying extension along the shaping contour.
10. A book as claimed in anyone of the preceding claims, characterized in that on each page of the second series a perimetral band (9) can be defined which is externally delimited by the shaping contour (4) of the page itself and is internally delimited by a line (10) substantially coincident with, or internal to, the orthogonal projection on said page of the shaping contour of the page placed below it, said perimetral band (9) having a varying extension along the shaping contour.
11. A book as claimed in claims 8, 9 and 10, characterized in that said front cover and/or said rear cover comprise an outer face on which a first graphic motif (11) is defined and an inner face on which a second graphic motif (12) is defined.
12. A book as claimed in claim 11, characterized in that it comprises successive pages intended for being consecutively interposed between said covers (7, 8) which, when they belong to the pages of the first series are provided, on a face turned towards the front cover, with respective complementary portions (11a) placed at least on said perimetral band and, when they belong to the pages of said second series, are provided, on a face turned towards said rear cover, with respective complementary portions (11a) of the first graphic motif placed at least on said perimetral band.
13. A book as claimed in claim 12, characterized in that said pages of the first series interposed between the front and rear covers are provided, on the face turned towards the front cover (7), with the second graphic motif (12) externally delimited by said perimetral band (9) and, on the opposite face turned towards the rear cover, with said second graphic

motif (12) substantially extending over said whole opposite face.

14. A book as claimed in claim 12, characterized in that the pages of the second series interposed between the front and rear covers (7 and 8) are provided, on the face turned towards the rear cover (8), with the second graphic motif (12) externally delimited by said perimetral band and, on the opposite face turned towards said front cover (7), with the second graphic motif substantially extending over said whole opposite face.
15. A book as claimed in anyone of the preceding claims, characterized in that it comprises one or more pages each provided with auxiliary protuberances (13) externally emerging away from said shaping contour, said auxiliary protuberances having a face turned towards the front cover on which further complementary portions (13a) of the first graphic motif are reproduced and a face turned towards the rear cover on which further complementary portions of the first or the third graphic motif are reproduced.
16. A book as claimed in anyone of the preceding claims, characterized in that the shaping contour (4) of each page (2) has a conformation differentiated from the shaping contour of the other pages.
17. A book as claimed in anyone of the preceding claims, characterized in that the shaping contour of at least one predetermined number of pages of the first or second series defines rest means (14) enabling the book to rest on a plane transverse and preferably orthogonal to the extension plane of each of said pages.
18. A book as claimed in claim 17, characterized in that said rest means comprises one or more coincident sections (15) of the shaping contour of a predetermined number of pages having the same conformation and overall dimensions in plan.
19. A book as claimed in claim 18, characterized in that said coincident sections define rest feet and/or continuous rest surfaces (16).
20. A book as claimed in anyone of claims 17 to 19, characterized in that said binding region (3) is close to said feet or continuous rest surfaces and extends transversely thereof.
21. A book as claimed in claims 8, 9 and 10, characterized in that said rear cover comprises an outer face on which a third graphic motif (18) is defined which extends over the whole page surface and an inner face on which at least one second graphic motif (12)

is defined which also preferably extends over the whole page surface.

22. A book as claimed in claim 21, characterized in that it comprises successive pages intended for being consecutively interposed between said covers which, when they belong to the second series pages, are provided, on a face turned towards the rear cover (8), with respective complementary portions (10a) of said third graphic motif (18) placed at least on said perimetral band.
23. A book as claimed in claims 11 or 22, characterized in that the first and/or possibly third graphic motifs also extend over the thickness "S" of each book page.
24. A book as claimed in claim 17, characterized in that the pages have suitable structure and shaping so as to define an overall centre of gravity of the book positioned in such a manner that the orthogonal projection of the centre of gravity on the rest plane is contained in an ideal perimeter defined by the rest means on the same rest plane.

FIG. 2

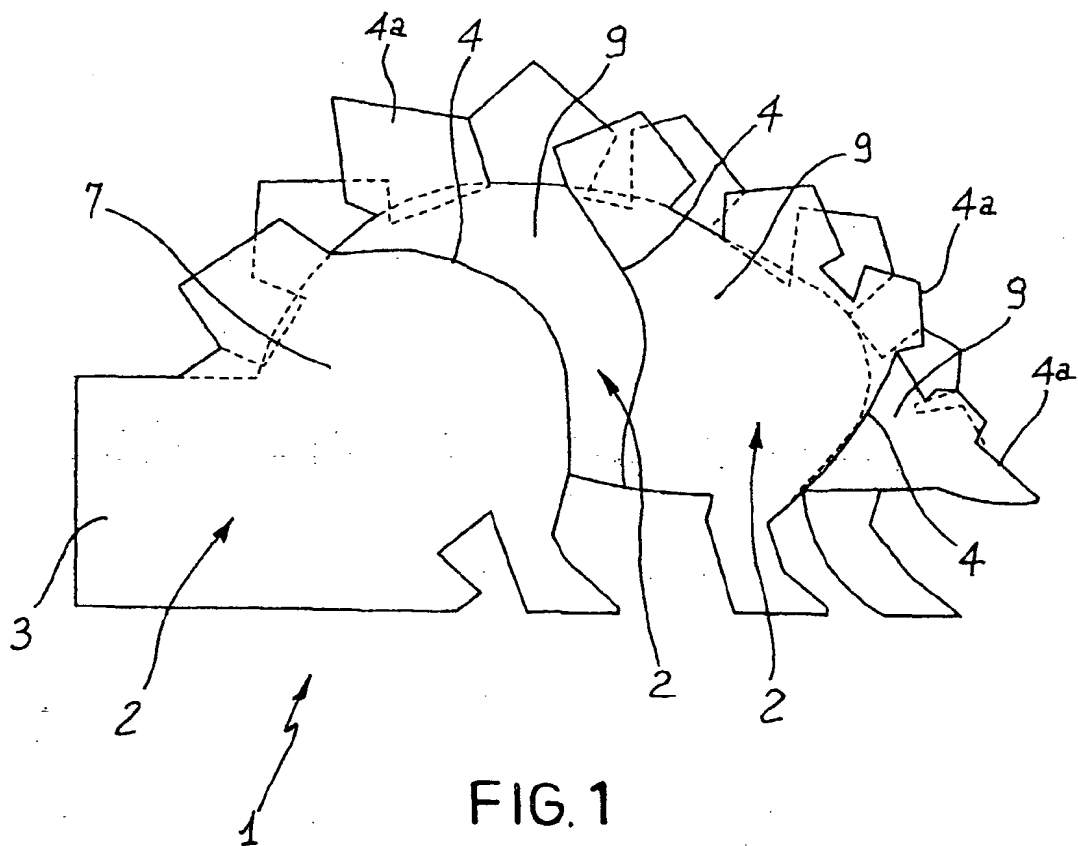
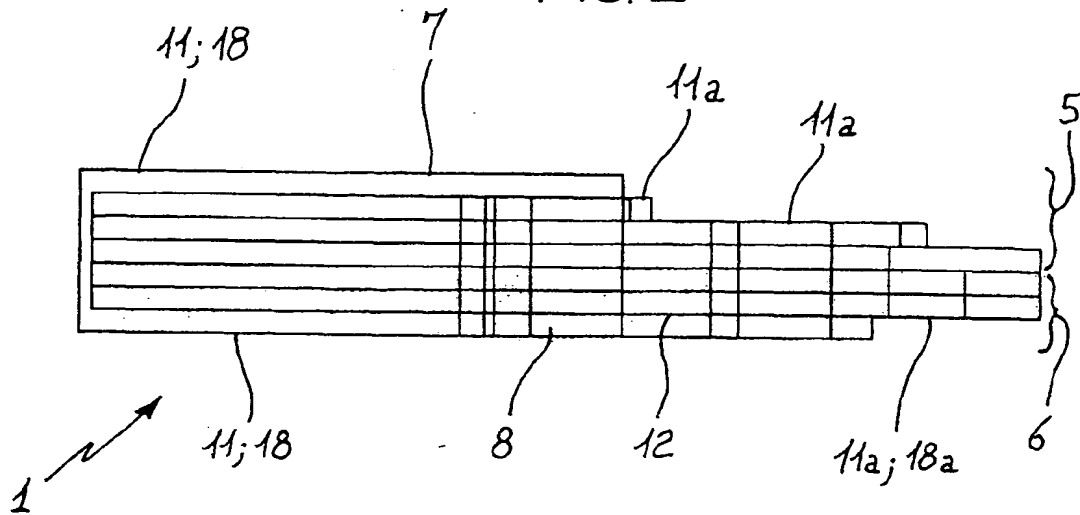


FIG. 1

FIG. 3

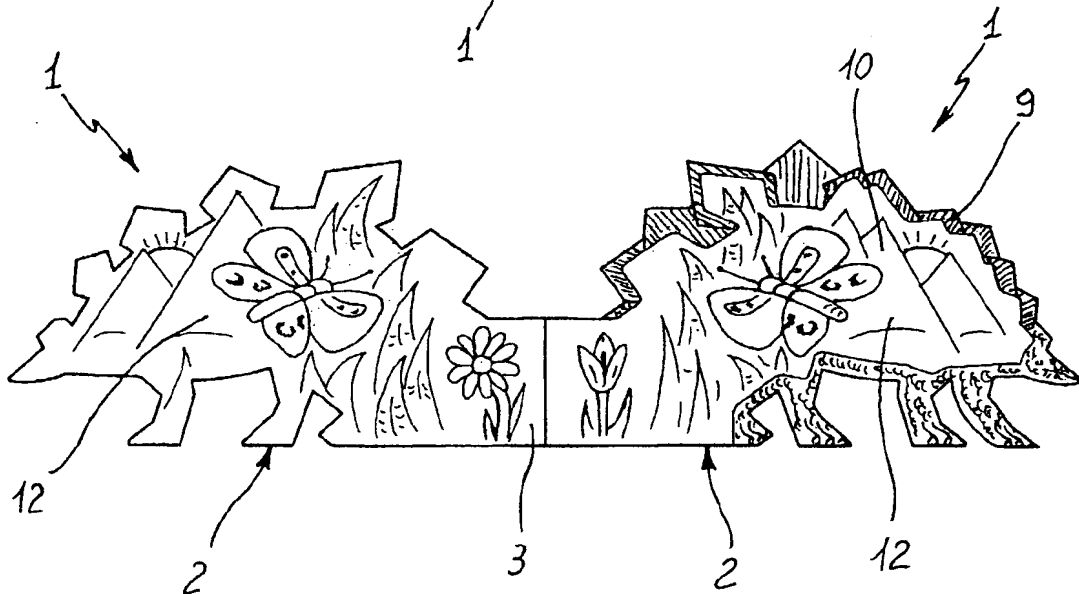
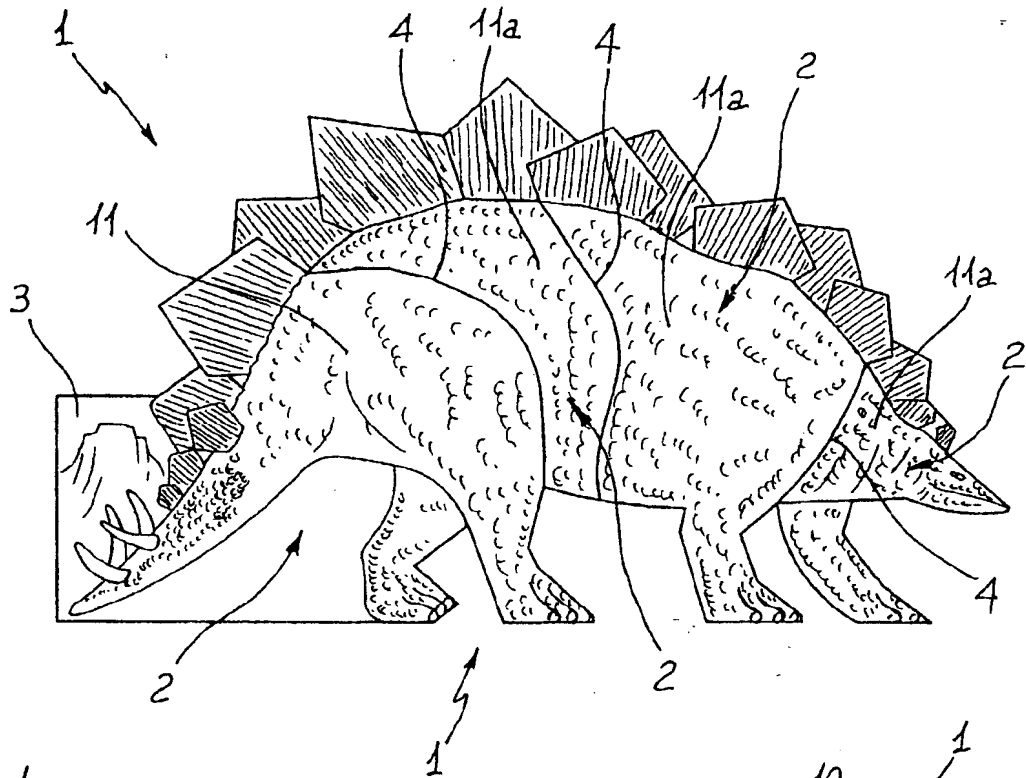


FIG. 4

FIG. 5

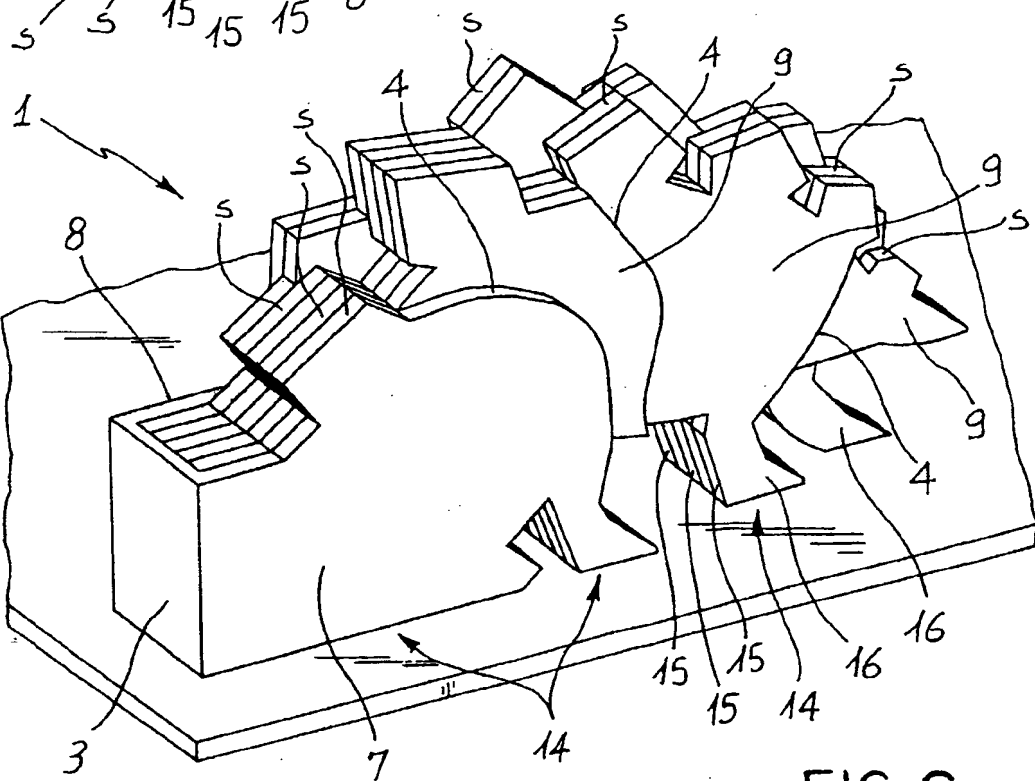
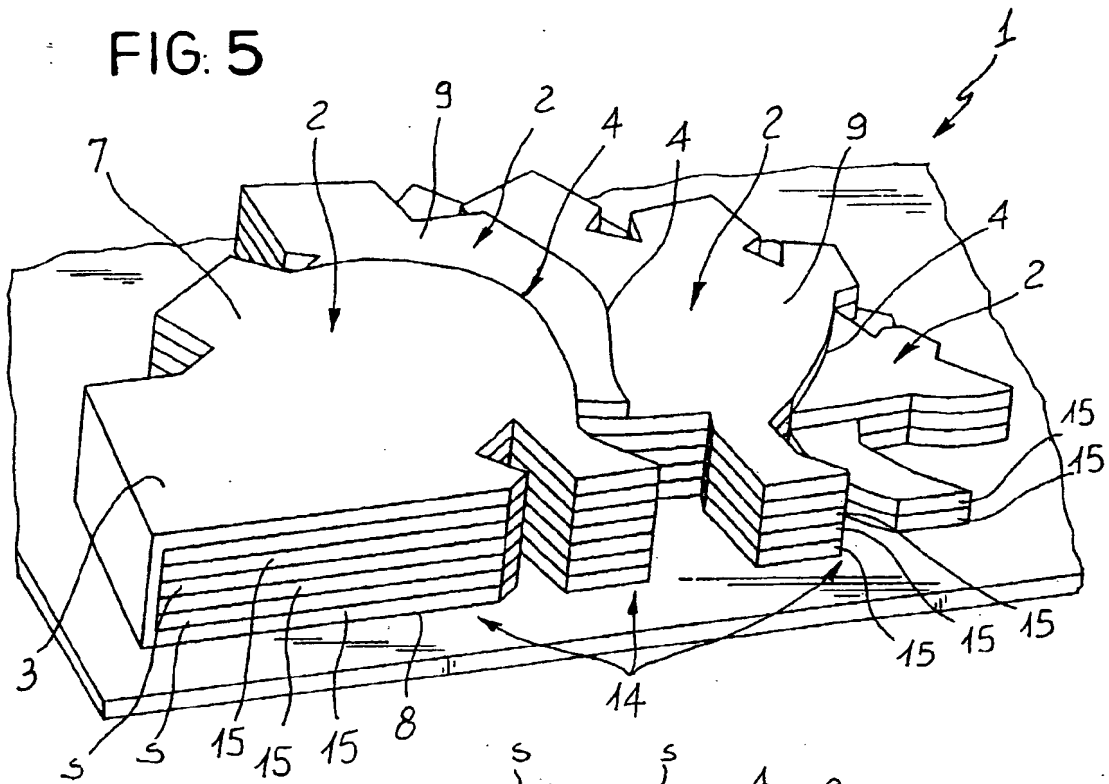


FIG. 6

FIG. 8

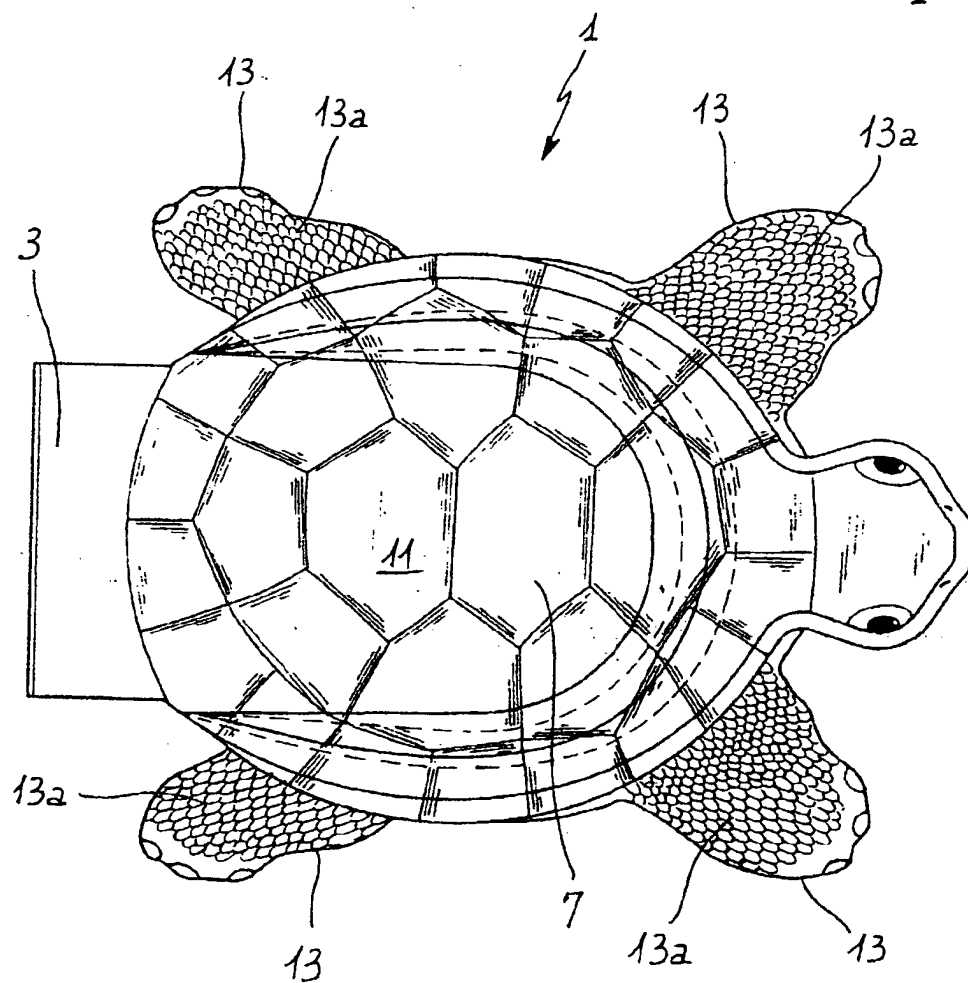
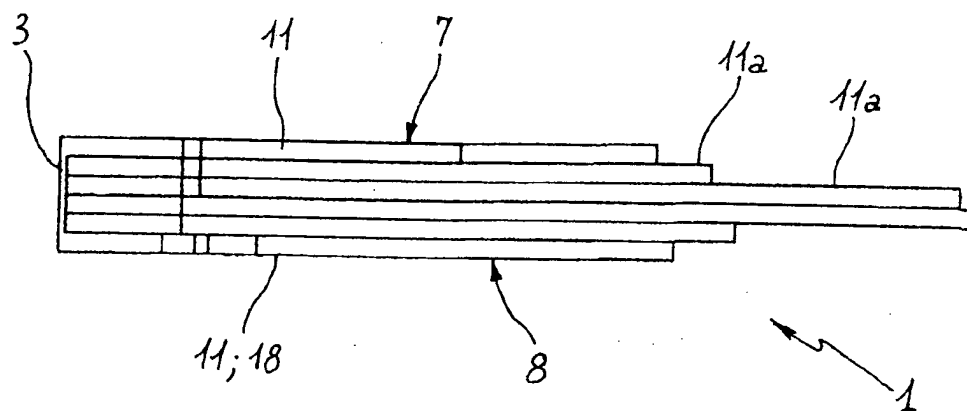


FIG. 7



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 83 0341

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 096 204 A (LIPPMAN PETER J H) 17 March 1992 (1992-03-17) * column 8, line 40-66 * * column 9, line 10-16 * * figures 22,39-41 *	1-5, 7-11, 16-24	A63H33/38 B42D1/00
Y	---	6,12-15	
Y,D	US 5 901 983 A (BINI RENATA) 11 May 1999 (1999-05-11) * column 2, line 30-45 * * figures *	6,12-15	
A	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 04, 31 March 1998 (1998-03-31) -& JP 09 327983 A (TOPPAN PRINTING CO LTD), 22 December 1997 (1997-12-22) * abstract *	1-24	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A63H B42D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 10 November 1999	Examiner Chabus, H
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background G : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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